PAG/OSS/M-12-67
7 August 1967

MEMORANDUM FOR: Assistant for Technical Development, NPIC

SUBJECT: Comparison of Rear Projection Viewers Scanning and Light Table/Stereomicroscope Procedures

1. During an evaluation of Mission Scanning and Mission Indexing operation by the Photographic Analysis Group, a comparison of [redacted] 25X1
25X1 [redacted] 940 MCE Light Table and 940 MCE Light Table procedures were made. Magnifications used on the Rear Projection Viewers were 5, 15, 30 for the [redacted] and 3, 6, 12, 30 for the [redacted] Mounted on the 25X1
25X1 940 MCE was a [redacted] Zoom 70 with continuous zoom range of 0.7X through 30X using 10X eyepieces.

2. The significant factors evolving from the evaluation are as follows:

a) In areas of low contrast i.e., semi-darkness, cloud shadow, or haze, targets were missed
25X1 when the RPV [redacted] was used. This same imagery was discernible when viewed with the [redacted] Zoom 70. 25X1

b) It was advantageous to concentrate on small areas of film imagery for study instead of large areas as presented on the rear projection viewers.

c) Rear Projection Viewers can be used only in a two man team concept. It is frequently necessary to look at a target in stereo and in addition, indexing targets is impossible when using the rear projection viewer. Concurrent indexing is simplified when using a light table.

d) Viewing of either the forwarded or aft photography is necessary to allow scanning of imagery covered on one but not the other. There is no capability for doing this on the rear projection viewer.

e) Indexing and scanning of large scale photography is accomplished by use of a light table. The scale factor involved and limited area of coverage has proven this method most efficient.

f) When considering the rear projection viewer as a scanning tool only on small scale photography, this instrument creates less eye fatigue than when viewing imagery on a light table.

3. As a general comment on the operation of the rear projection viewers, it was the opinion of the photointerpreters that insufficient resolution and illumination were available at the screen of the [redacted] also suffered from the heat (stalled motors and film sticking in platen), bulbs fuzed to heat filters and unreliable scan and slew. The [redacted] in addition to low resolution was more difficult to load and the projected image on the screen was not in focus throughout the width of the film. During scan the operator had to continuously refocus the image.

25X1

25X1

4. In conclusion, it is the consensus of the PAG that the rear projection viewers are not capable of resolving low contrast, small imagery as well as the stereomicroscopes. This factor in itself would prevent the photointerpreter from having confidence in any readout derived solely from rear projection viewer scanning procedures. Use of the rear projection viewer would be an aid - not the primary source of intelligence - only when used with small scale photography.

[redacted]

25X1

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